REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested. Claims 1-90 are pending, with claims 20-35 being withdrawn and claims 1, 20, 27, 36, 54, 61, 78, and 85 being independent. Claims 20-35 are cancelled; claims 1, 8, 18, 36, 42, 47, 54, 56-61, 70-71, 78, 80, 85, and 87 are amended; and claims 91-102 have been added. No new matter has been added.

Election/Restrictions

Nonelected claims 20-35 have been cancelled in response to the request to cancel nonelected claims.

Objection to the Specification and Claim Rejections under 35 U.S.C. § 112

The specification stands objected to as allegedly failing to comply with the enablement requirement. In addition, claims 2-7, 19, 38-43, and 63-68 stand rejected as allegedly failing to comply with 35 U.S.C. § 112. Both the objection and the rejections are based on the use of the word "may" in the specification on page 6, lines 12-16. Without conceding the propriety of the Examiner's position, and solely to expedite examination, the specification has been amended to address the Examiner's concerns. In view of the amended specification, which omits "may" on page 6, line 13, applicant requests withdrawal of the objection to the specification and the rejections of the claims.

Drawings

The drawings stand objected-to for the reasons set forth on page 2 of the Office action. New formal drawings are submitted herewith to overcome these objections.

Claim Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1, 2, 6-8, 11, 13, 16, 17, 19, 36-38, 42-44, 46, 48, 51, 52, 54, 56, 57, 60-63, 67-70, 72, 75, 76, 78, 80, 81, 84-87, 89 and 90 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Benedetto et al. (S. Benedetto, D. Divsalar, G. Montorsi, and F. Pollara, Soft-Output Decoding Algorithms in Iterative Decoding of Turbo Codes, TDA progress Report 42-124, Feb. 15, 1996) (Hereinafter "Benedetto"). Claims 3-5, 10, 39-41 and 64-66 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Benedetto. Claims 9, 45 and 88 stand rejected under 35 U. S. C. § 103(a) as allegedly being unpatentable over Benedetto in view of Divsalar et al. (D. Divsalar and F. Pollara, Hybrid Concatenated Codes and Iterative Decoding, TDA progress Report 42-130, August. 15, 1997) (Hereinafter "Divsalar"). Claims 12, 14, 15, 18, 47, 49, 50, 53, 55, 58, 59,71, 73, 74, 77, 79, 82 and 83 stand rejected under 35 U. S. C. 103(a) as allegedly being unpatentable over Benedetto in view of Stephen et al. (U.S. Pat. No. 6,484,283) (Hereinafter "Stephen"). These rejections and their underlying rationale are traversed.

Claims 1, 36, 54, 61, 78, and 85 have been amended to clarify the claimed subject matter. Independent claims 91, 93, 95, 97, 99, and 101 have been added. Support for these claim amendments can be found at least on pages 21-22 and 25 of the specification.

Amended claims 1, 36, 54, 61, 78, and 85, and new claims 91, 93, 95, 97, 99, and 101 include language directed toward using a tree structure arranged in a parallel suffix and/or prefix architecture to compute forward state metrics and/or backward state metrics, respectively, and/or a soft-inverse of a finite state machine. Consider the exemplary language of claim 1:

> "at least one SISO module using a tree structure arranged in a parallel prefix and suffix architecture to compute forward and backward state metrics."

Neither Benedetto, nor Divsalar, nor Stephen teach or suggest using a parallel suffix and/or prefix architecture to compute forward state metrics and/or backward state metrics, respectively, and/or a soft-inverse of a finite state machine.

Claims 2-19, 37-53, 62-77, 79-84, 86-90, 92, 94, 96, 98, 100, and 102 depend, directly or indirectly, from claims 1, 36, 54, 61, 78, 85, 91, 93, 95, 97, 99, and 101. Accordingly, applicant submits these claims are allowable for the reasons given above.

Conclusion

In view of the above amendments and remarks, therefore, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully requested.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally,

nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 7/1/04

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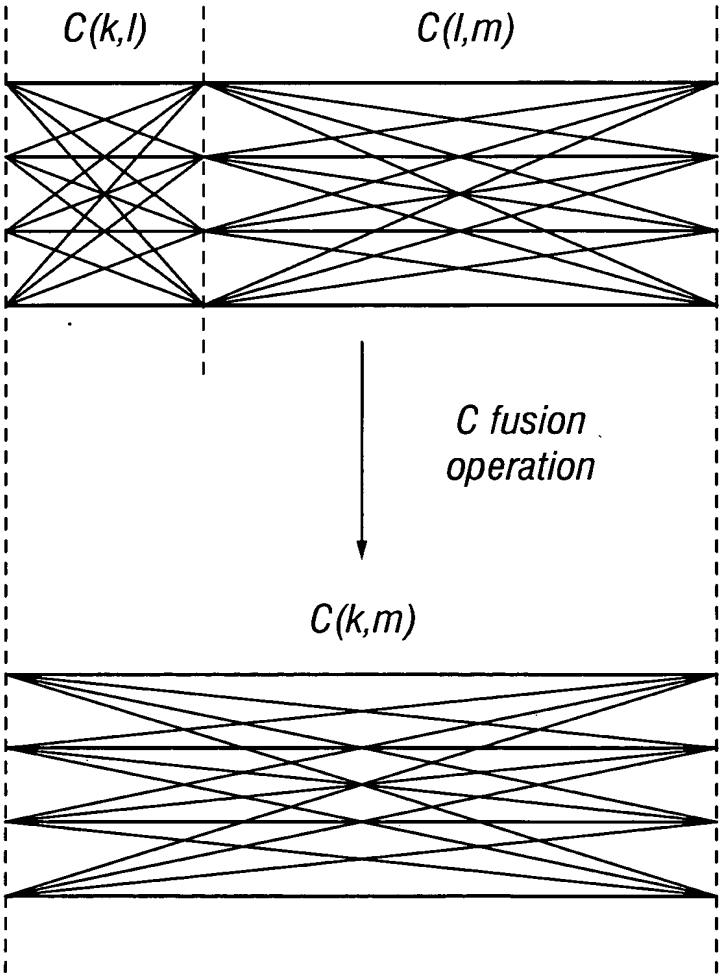

FIG. 1

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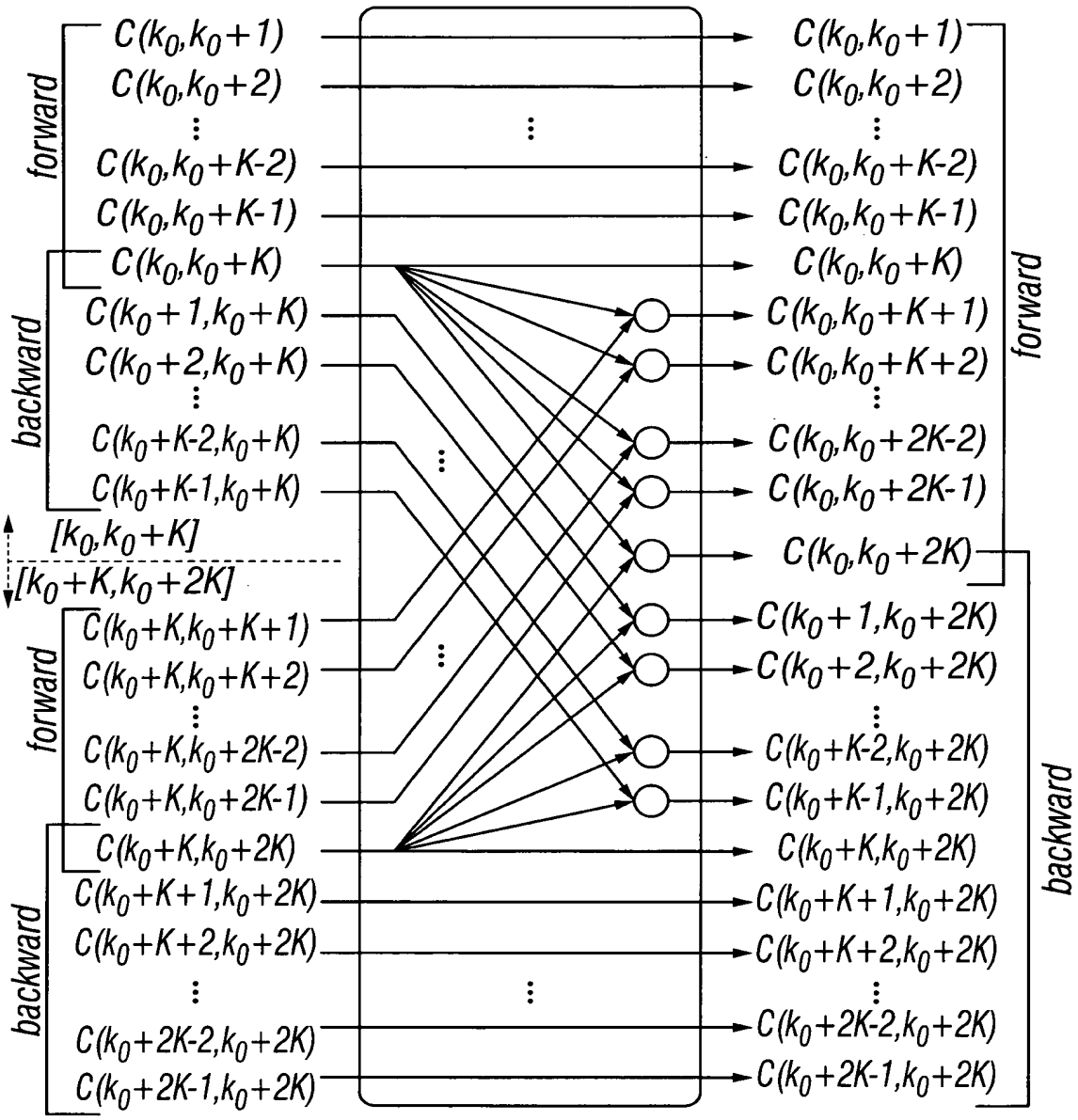

FIG. 2

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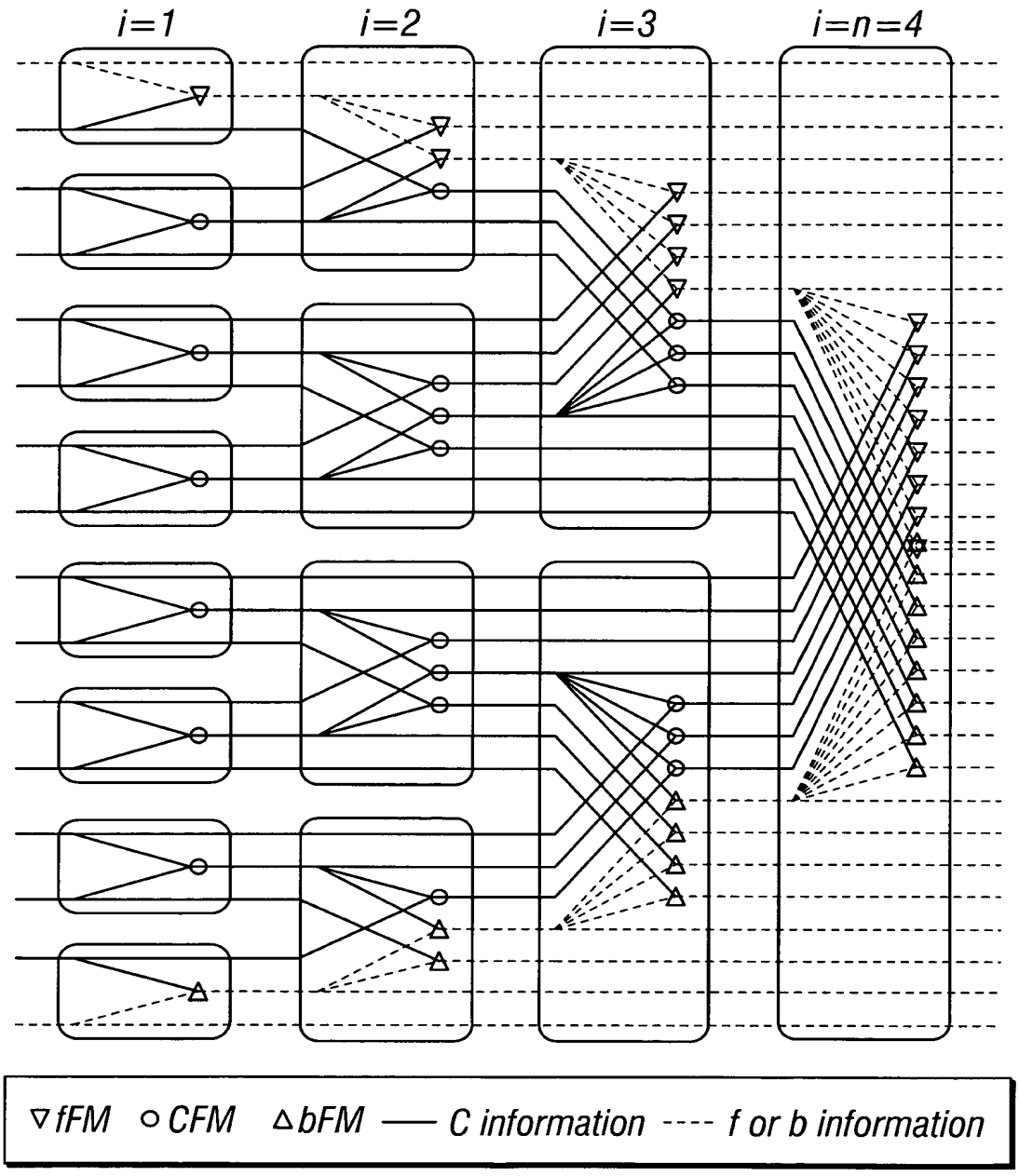

FIG. 3

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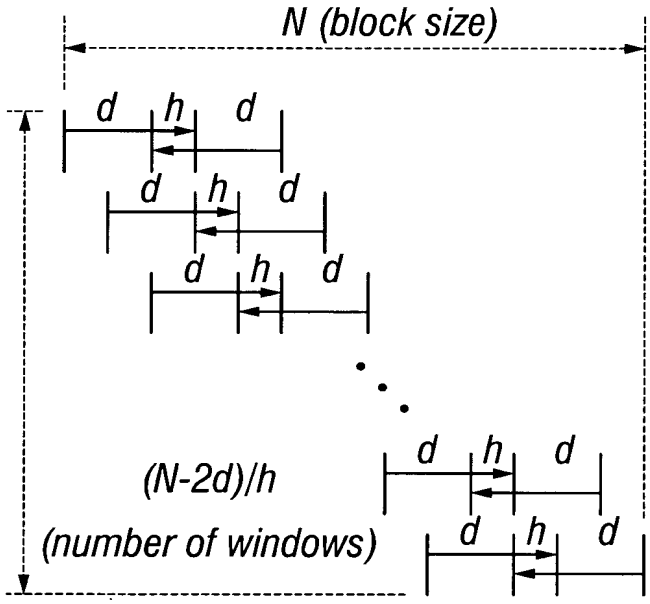

FIG. 4

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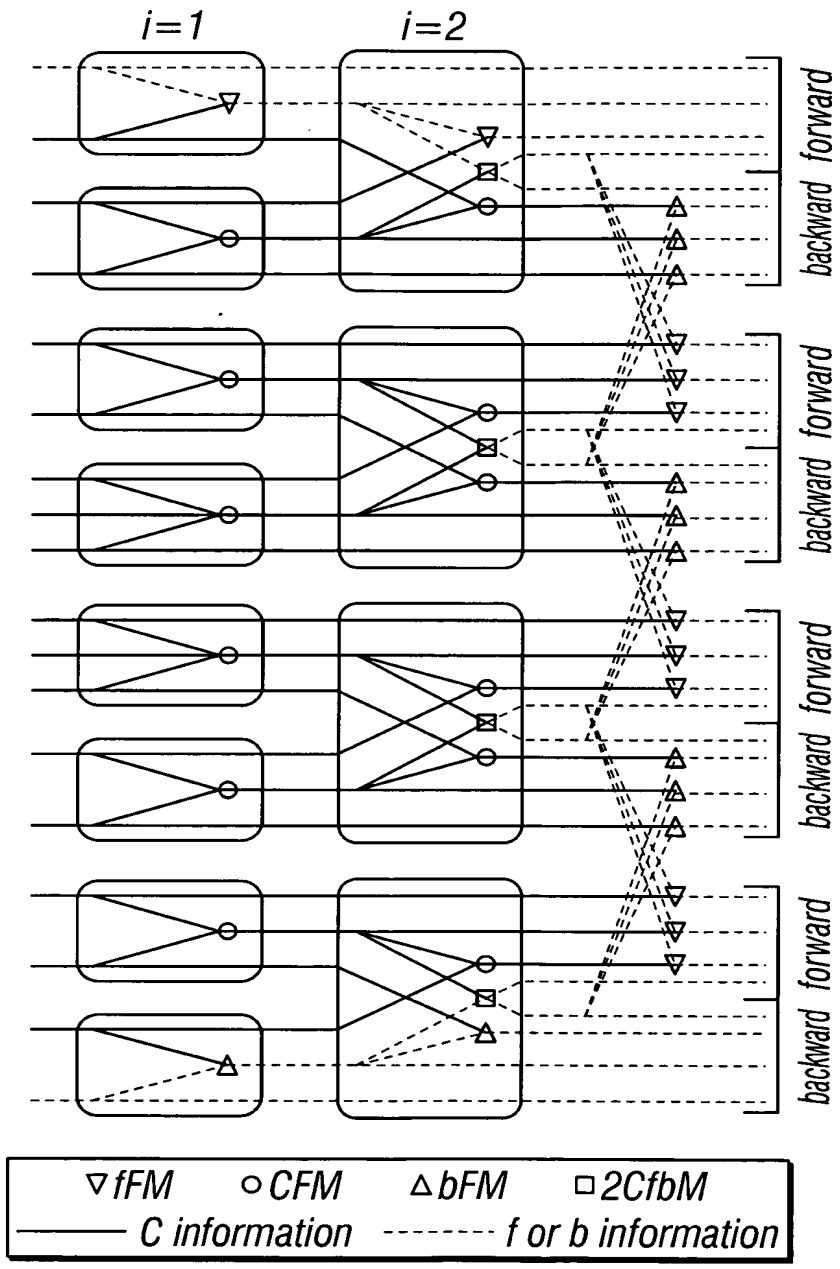

FIG. 5

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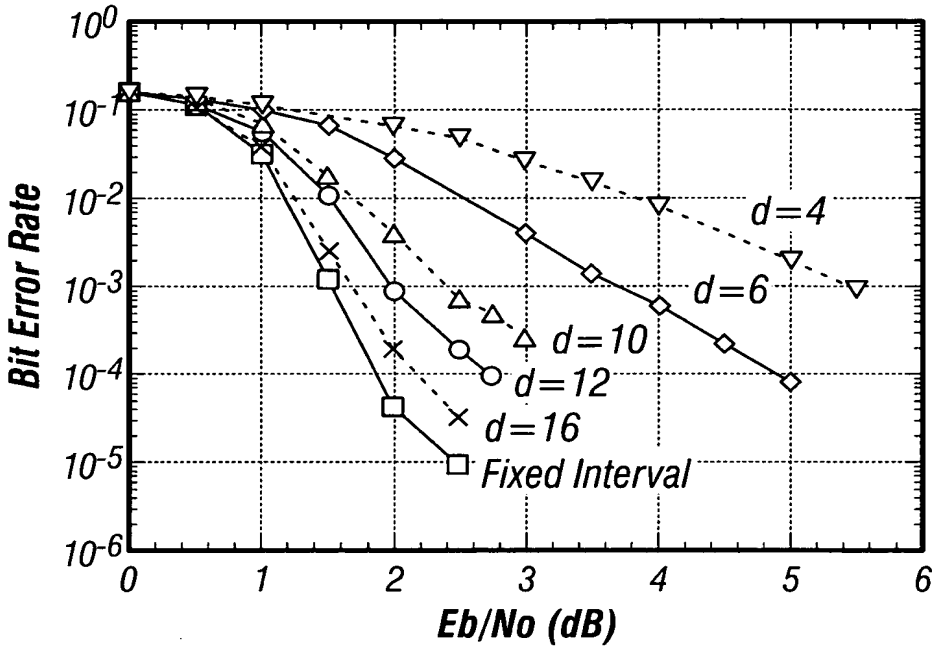

FIG. 6

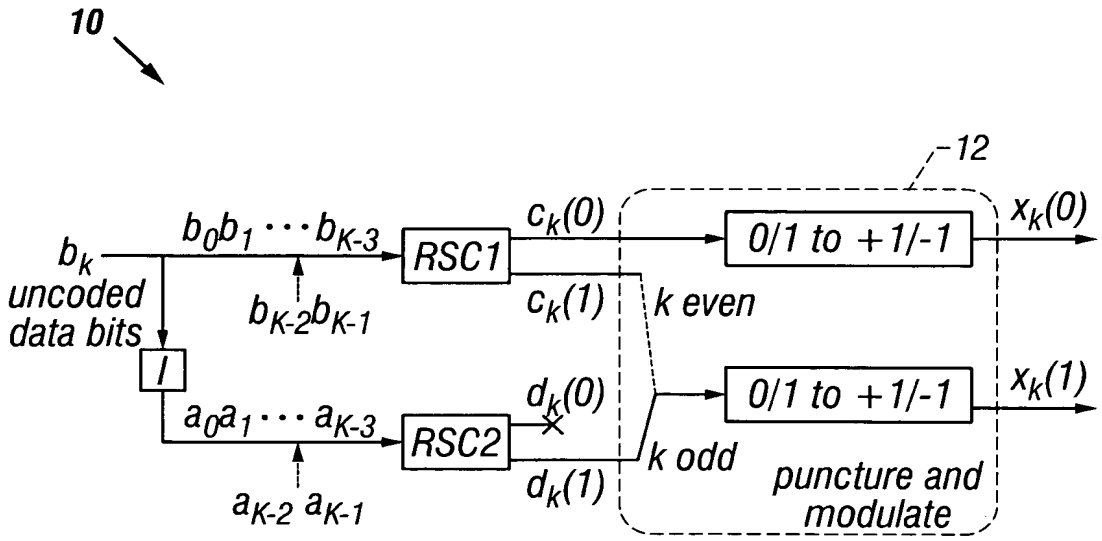

FIG. 7A

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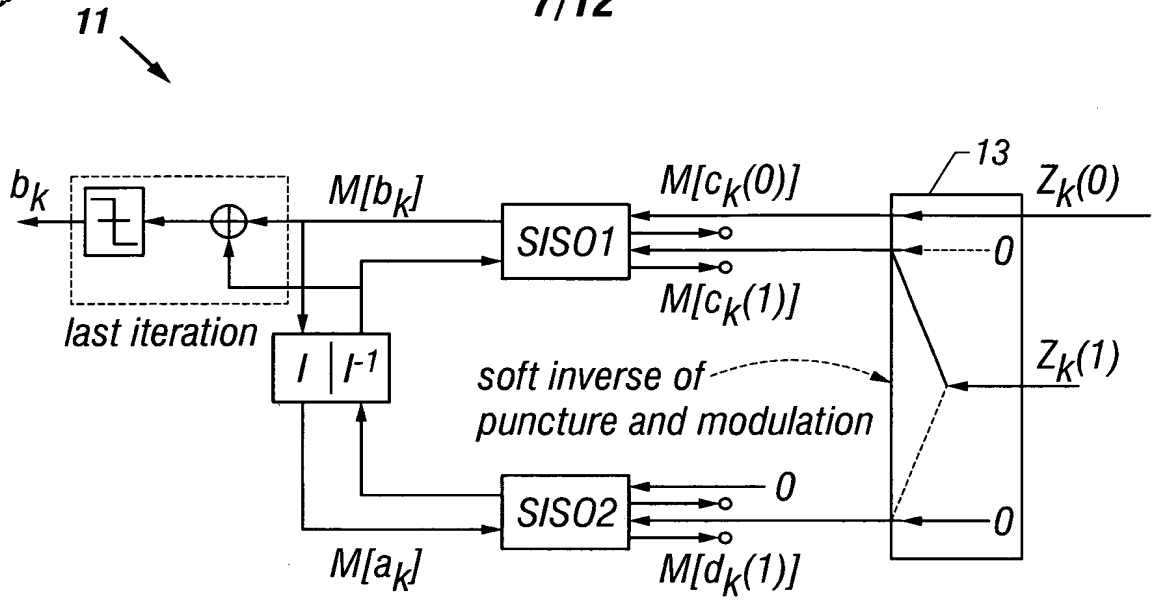

FIG. 7B

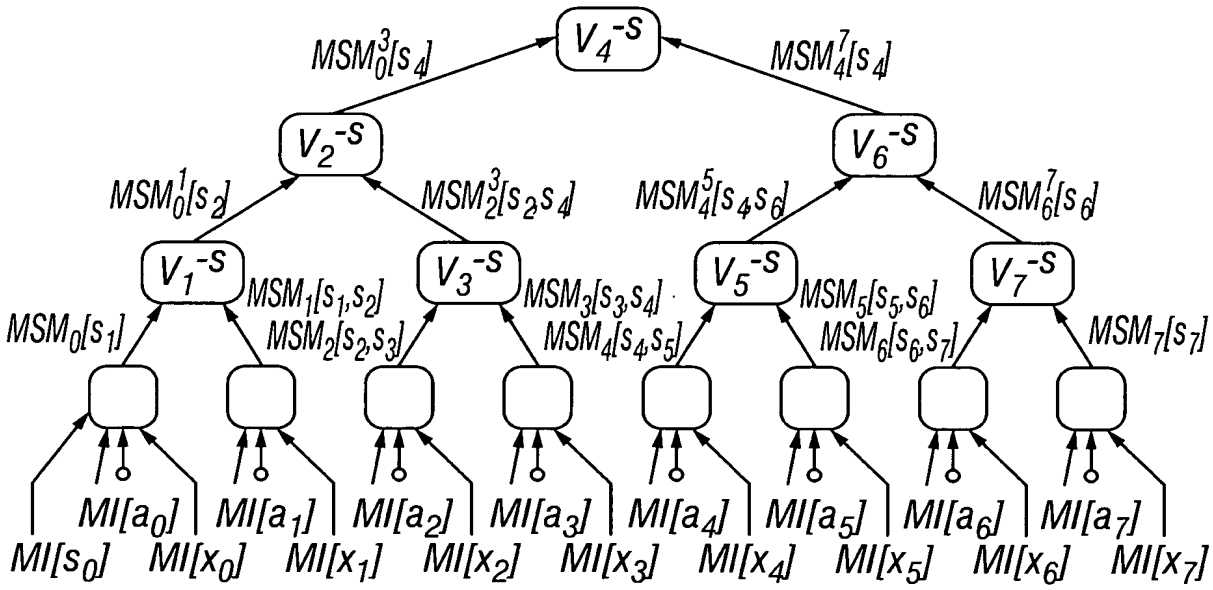

FIG. 8A

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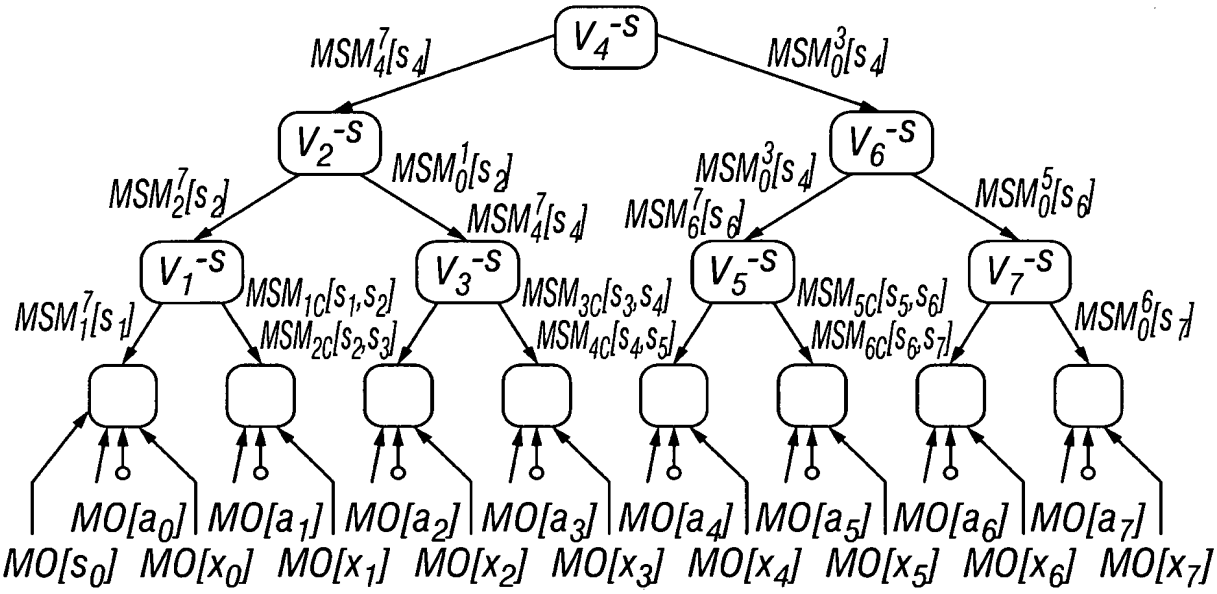

FIG. 8B

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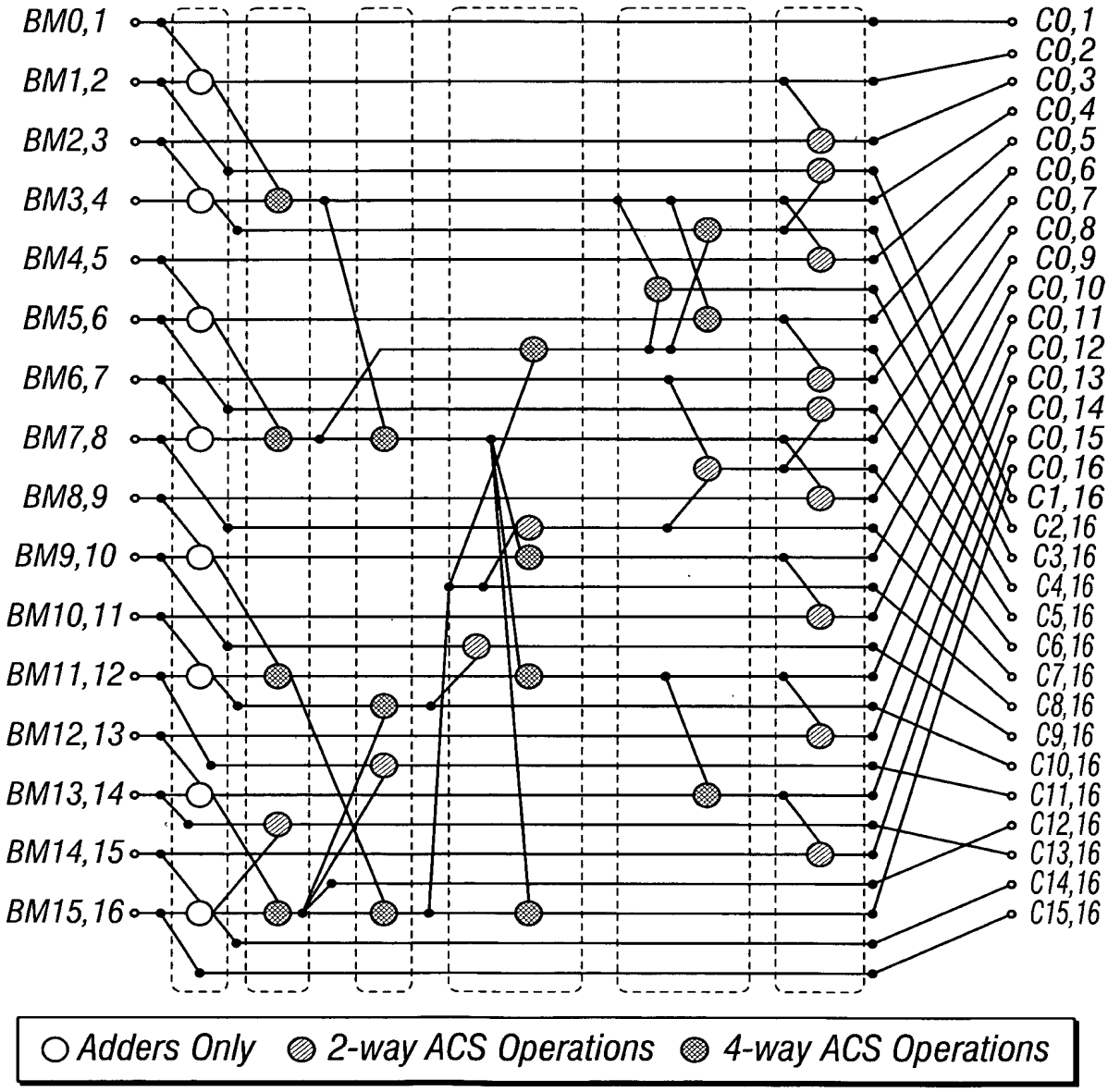

FIG. 9

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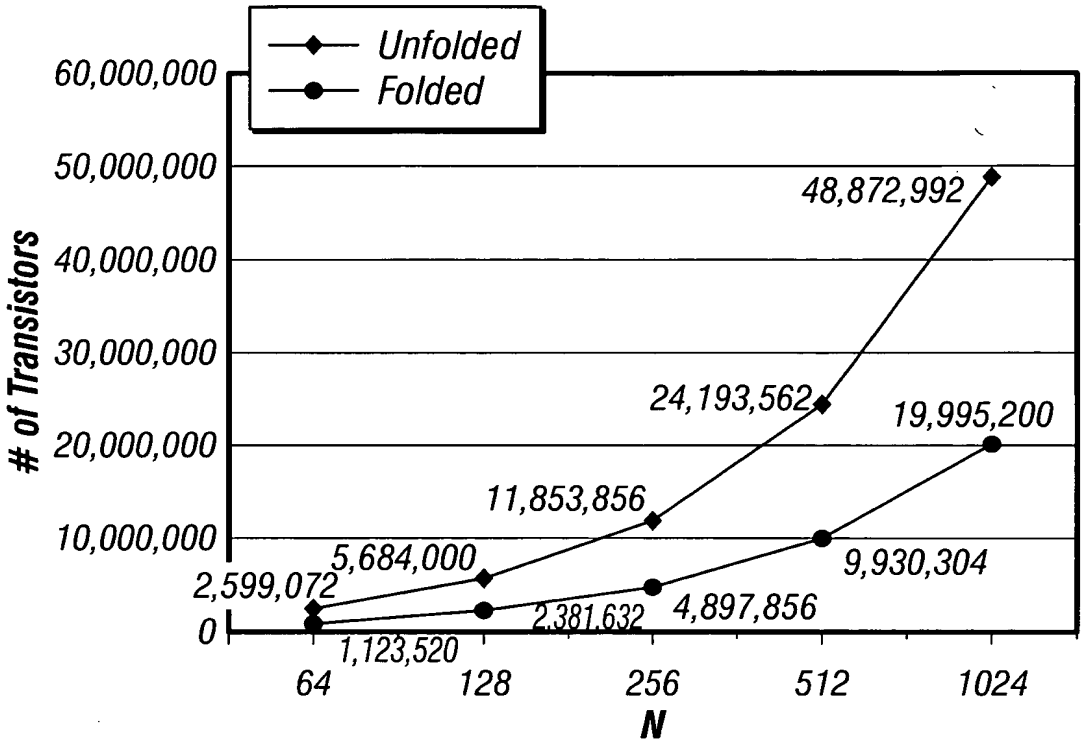

FIG. 10

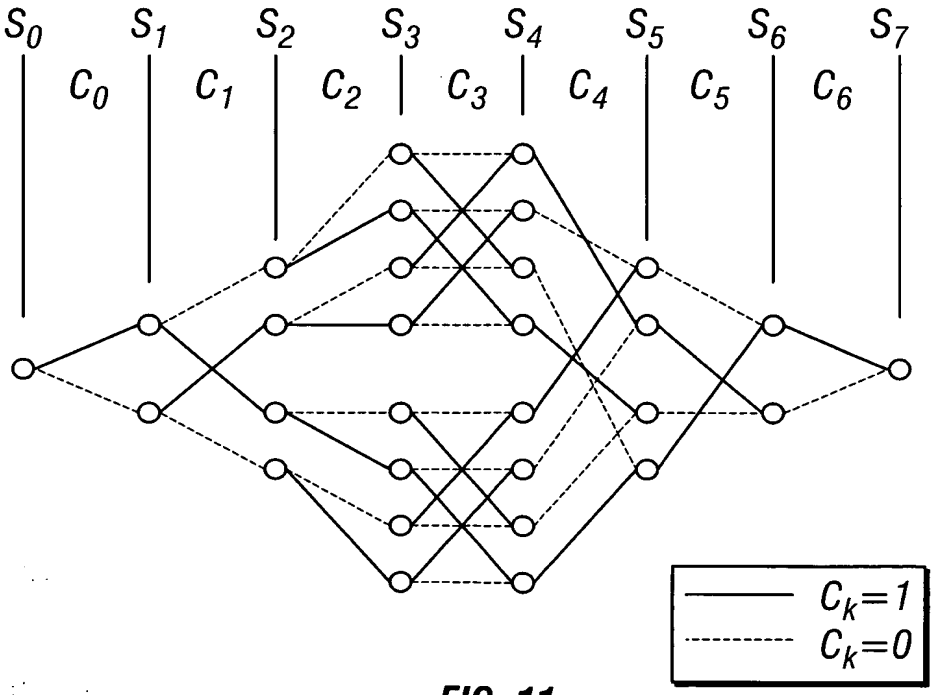

FIG. 11

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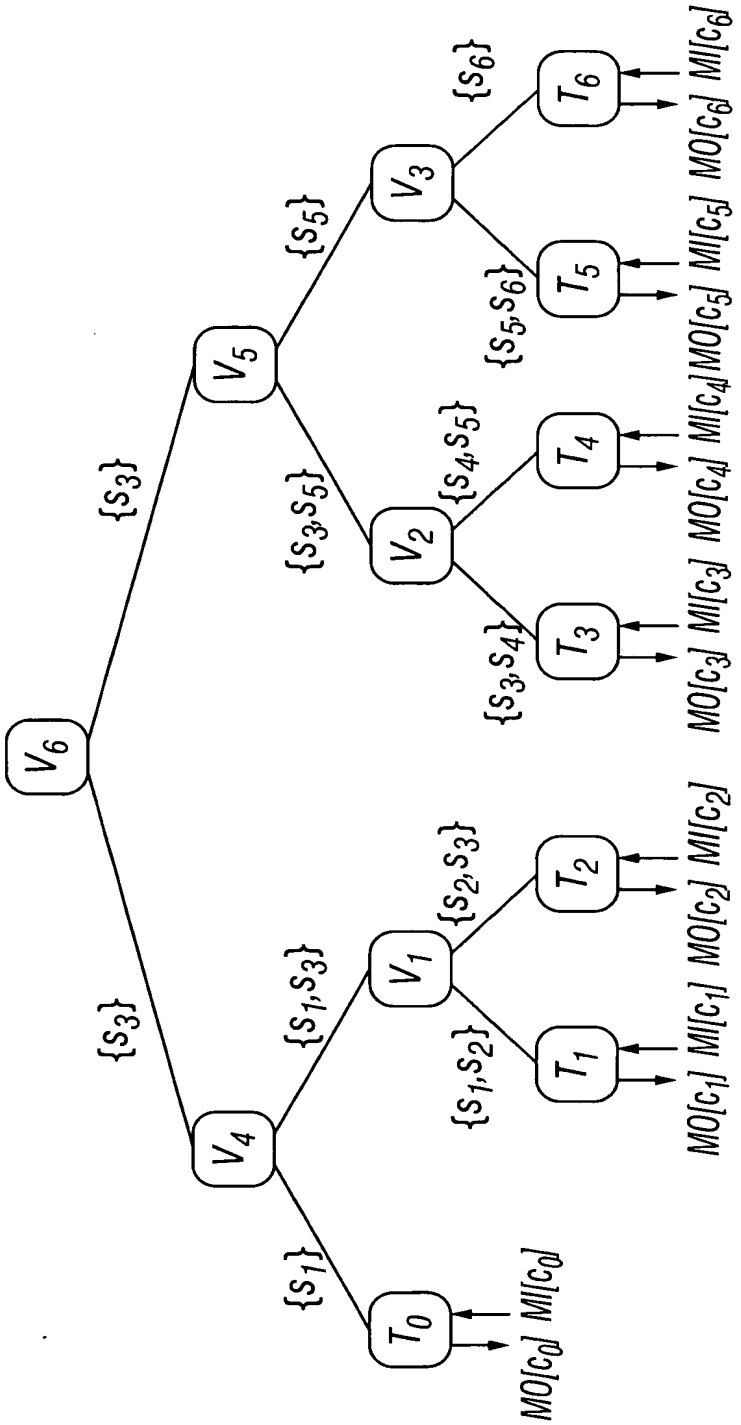

FIG. 12

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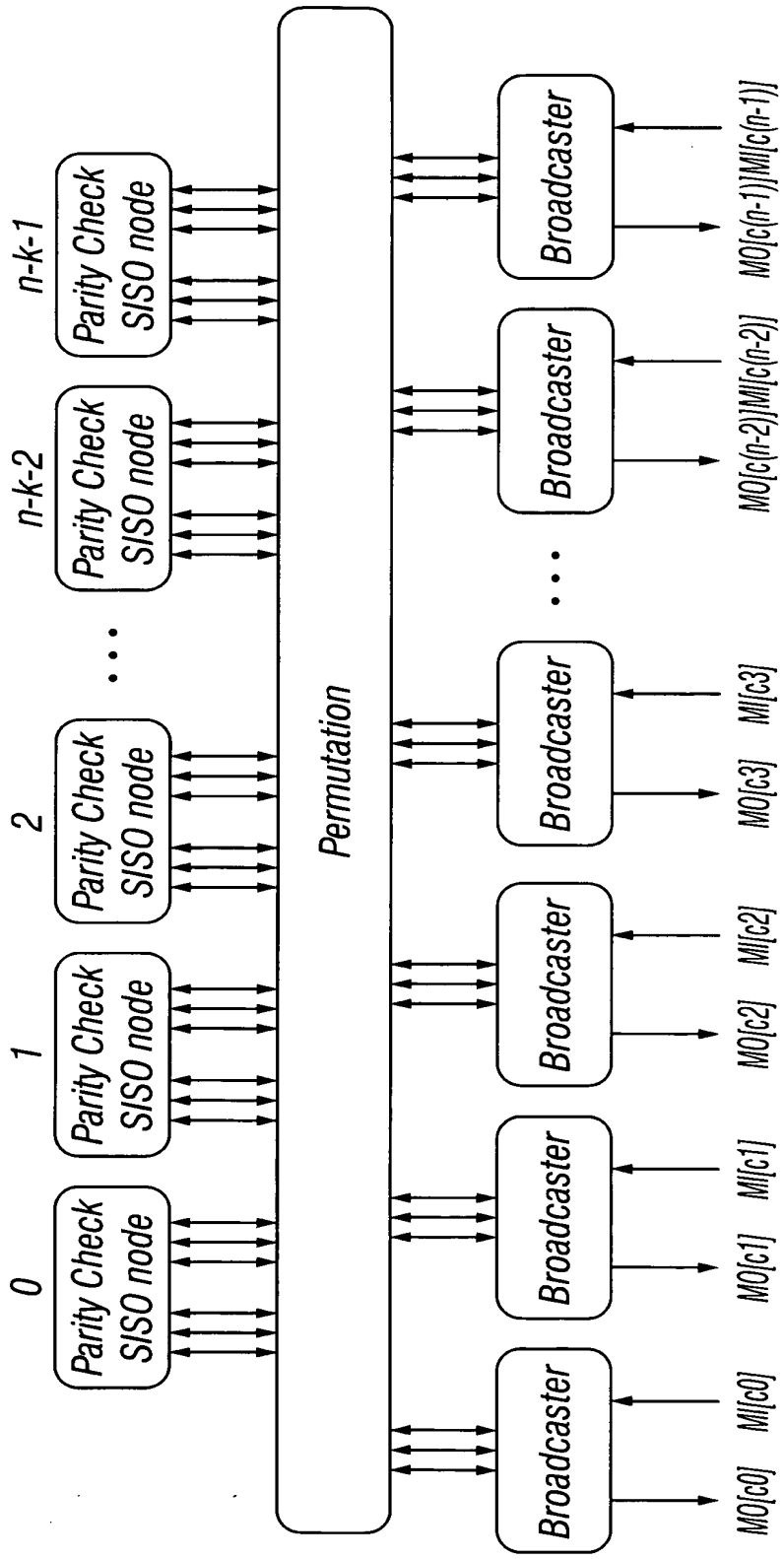

FIG. 13